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GC-MS ANALYSIS OF VIBURNUM OPULUS (L) EXTRACT AND ITS TOXICITY STUDIES IN RATS

A Adebayo

Biochemistry and Molecular Biology Unit, Department of Biological Sciences, Covenant University, Ota, Ogun State, Nigeria

A Alade

Biochemistry and Molecular Biology Unit, Department of Biological Sciences, Covenant University, Ota, Ogun State, Nigeria

O Yakubu

Biochemistry and Molecular Biology Unit, Department of Biological Sciences, Covenant University, Ota, Ogun State, Nigeria

This study was aimed at establishing the antimicrobial and phytochemical profiles of *Viburnum opulus* (L) as well as the safety potential of the extract in albino Wistar rats. Ethanol, n-hexane, ethyl acetate, butanol and water fractions were prepared for both phytochemical assessment using gas chromatography-mass spectrum analysis (GC-MS)¹. Five groups of seven rats were used for the study. Group A received distilled water (control), while groups B to E were treated respectively with 250, 500, 1000 and 1500 mg/kg body weight of *V. opulus* extract by abdominal canulisation for 28 days². Blood samples were obtained for biochemical analyses and the liver tissues were further processed for histological studies. The GC-MS spectra revealed the existence of various phytoconstituents such as neophytadiene, germacene, caryophyllene among others. High density lipoprotein and albumin were significantly ($p < 0.05$) elevated in animals administered with 500, 1000 and 1500 mg/kg bw of the leaf extract. Ethanol, butanol and water fractions of the leaf of *V. opulus* showed antimicrobial action against most of the organisms used in this study. The result indicates the *V. opulus* leaf extract contains a wide range of fatty acids and heterocyclic compounds with antimicrobial efficacy and no hepatic damage.

[1] Adebayo AH, Aliyu R, Gatsing D, Garba IH. *Int. J. Pharmacol* 2006; 2: 618 – 622.

[2] Adebayo AH, Abolaji AO, Opata TK and Adegbenro IK. *Afr. J. Biotechnol* 2010; 9: 2145 – 2150.